

Applicant: Nigel David Timms et al.  
Application No.: 10/580,455

## **REMARKS**

The Applicant thanks the Examiner for the careful consideration of this application.

Claims 2, 6, 9-14, 17, and 24-27 are currently pending. Claims 9, 10, 17, and 24 have been amended. New claims 25-27 have been added. Claims 1, 3-5, 7, 8, 15, 16, and 18-23 have been cancelled, without prejudice. Based on the foregoing amendments and the following remarks, the Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

### **Objections to the Specification**

The Office Action objected to the Abstract because it allegedly “is only a summary of the invention according to claim 1, not the entire invention.” The Office Action cites to MPEP Section 608.01(b) in support of this objection. The Applicant traverses this objection.

MPEP Section 608.01(b), subsection “B,” which sets forth the required content of an Abstract, states that “[i]f the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.” The Applicant submits that the present application discloses alternative embodiments, and that the Abstract mentions one of the preferred embodiments. Accordingly, the Applicant submits that the present Abstract is in compliance with MPEP Section 608.01(b).

Withdrawal of this objection is respectfully requested.

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Rejections under 35 U.S.C. § 112

(1) The Office Action rejected claims 22 and 23 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Applicant traverses this rejection. Nevertheless, solely to further prosecution, claims 22 and 23 have been cancelled, thereby rendering this rejection moot.

(2) The Office Action rejected claim 17 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement for the recited cross-sectional ratio of 1:2.5. The Applicant traverses this rejection. Nevertheless, solely to further prosecution, claim 17 has been amended to change the recitation of 1:2.5 to 1:2.4, which the Office Action expressly acknowledged is enabled by the specification. Accordingly, the Applicant requests that this rejection be withdrawn.

(3) The Office Action rejected claims 22 and 23 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Applicant traverses this rejection. Nevertheless, solely to further prosecution, claims 22 and 23 have been cancelled, thereby rendering this rejection moot.

Rejections under 35 U.S.C. § 102

(1) The Office Action rejected claims 1, 4, 5, 8-11, 13, and 22-24 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,520,158 to Williamson et al. (“Williamson”). The Applicant traverses this rejection. Solely to further prosecution, claims 1, 4, 5, 8, 22, and 23 have been cancelled, and claims 9, 10, and 24 have been amended. The Applicant submits that claim 10, the independent claim, is patentable over Williamson for at least the following reasons.

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Williamson does not disclose a “magnetic fluid treatment device comprising two or more fluid channels,” as recited by claim 10. The Office Action aligns the in-line fuel pretreatment device of Williamson’s Abstract with the claimed “magnetic fluid treatment device,” and aligns the conduit 4 of Williamson’s FIGS. 1 and 2 with the claimed “fluid channel.” However, Williamson fails to disclose that the in-line fuel pretreatment device comprises “two or more” of the conduits 4, as recited by claim 1. Instead, Williamson’s in-line fuel pretreatment device includes a single conduit 4, as shown in FIGS. 1 and 2. Accordingly, Williamson does not disclose a “magnetic fluid treatment device comprising two or more fluid channels,” as recited by claim 10.

Claims 11 and 13 depend from claim 10, and are patentable for at least the same reasons. Claims 9 and 24 have been amended to depend from independent claim 2, which is not subject to this rejection. Accordingly, the Applicant requests that this rejection be withdrawn.

(2) The Office Action rejected claims 10 and 11 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,711,271 to Weisenbarger et al. (“Weisenbarger”). The Applicant traverses this rejection. Solely to further prosecution, claim 10 has been amended. The Applicant submits that claim 10, the independent claim, is patentable over Weisenbarger for at least the following reasons.

Weisenbarger does not disclose a “magnetic fluid treatment device comprising two or more fluid channels,” as recited by claim 10. The Office Action aligns the magnetic fluid conditioner disclosed in Weisenbarger’s Abstract with the claimed “magnetic fluid treatment device,” and aligns the fluid conducting conduit 16 of Weisenbarger’s FIGS. 1 and 2 with the

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claimed “fluid channel.” However, Weisenbarger fails to disclose that the magnetic fluid conditioner comprises “two or more” of the fluid conducting conduits 16, as recited by claim 10. Rather, as shown in FIGS. 1 and 2, Weisenbarger’s magnetic fluid conditioner only has one fluid conducting conduit 16. Accordingly, Weisenbarger does not disclose a “magnetic fluid treatment device comprising two or more fluid channels,” as recited by claim 10.

Claim 11 depends from claim 10, and is patentable for at least the same reasons. Accordingly, the Applicant requests that this rejection be withdrawn.

#### Rejections under 35 U.S.C. § 103

(1) The Office Action rejected claims 2, 3, 6, 7, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Williamson. The Applicant traverses this rejection. Regardless, solely to further prosecution, claims 3 and 7 have been cancelled. Claim 2, the independent claim, is patentable over Williamson for at least the following reasons.

Williamson does not disclose or render obvious “the ratio of the cross-sectional area of the fluid supply conduit to the total cross-sectional area of the fluid channel or all of the fluid channels being in the range substantially 1:1.1 to substantially 1:2.8,” as recited by claim 2. The Office Action aligns the conduit 4 of Williamson’s FIGS. 1 and 2 with the claimed “fluid channel.” The Office Action asserts that Williamson discloses a “fluid supply conduit” in column 1, lines 35-46. The Office Action acknowledges that Williamson fails to disclose the claimed ratio of the cross-sectional area of the asserted fluid supply conduit to the cross-sectional area of the conduit 4, but asserts that the ratio would have been obvious in view of Williamson’s

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FIG. 2, where the housing 2 is wider than the conduit 4. The Applicant disagrees, because neither fuel nor fluid flows through Williamson's housing 2.

Williamson only discloses that fuel flows through the conduit 4, as indicated by arrow 6 in FIG. 1. (See Williamson at col. 2, ll. 49-51.) The housing 2 is an enclosure that surrounds the conduit 4, as shown in FIG. 1, but no fuel flows through it. Therefore, Williamson does not disclose, or render obvious, any ratio of the cross-sectional area of the asserted fluid supply conduit to the total cross-sectional area of the conduit 4. At best, Williamson discloses a housing 2 having a cross-sectional area greater than the cross-sectional area of the conduit 4. Therefore, Williamson does not disclose or render obvious "the ratio of the cross-sectional area of the fluid supply conduit to the total cross-sectional area of the fluid channel or all of the fluid channels being in the range substantially 1:1.1 to substantially 1:2.8," as recited by claim 2.

Claim 6 depends from claim 2, and is patentable over Williamson for at least the same reasons. Claim 17 depends from claim 10, which is not subject to this rejection. Accordingly, the Applicant requests that this rejection be withdrawn.

(2) The Office Action rejected claims 12 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Williamson in view of U.S. Patent No. 3,951,807 to Sanderson ("Sanderson"). Claims 12 and 14 depend from claim 10, which, as demonstrated above, is patentable over Williamson. Sanderson does not remedy the deficiencies of Williamson. Accordingly, claims 12 and 14 are patentable over any reasonable combination of Williamson and Sanderson.

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New Claims

New independent claims 25-27 have been added. The Applicant submits that new claim 25 is patentable over the applied references, for at least the reason that no reasonable combination of the applied references discloses or renders obvious “wherein the fluid supply conduit defines a first cross-sectional area, the fluid channel defines a second cross-sectional area, and a ratio of the first cross-sectional area to the second cross-sectional area is between about 1:1.1 and about 1:2.8.”

The Applicant submits that new claim 26 is patentable over the applied references, for at least the reason that no reasonable combination of the applied references discloses or renders obvious “wherein the fluid supply conduit defines a first cross-sectional area, the two or more fluid channels in combination define a second cross-sectional area, and a ratio of the first cross-sectional area to the second cross-sectional area is between about 1:1.1 and about 1:2.8.”

The Applicant submits that new claim 27 is patentable over the applied references, for at least the reason that no reasonable combination of the applied references discloses or renders obvious “wherein the fluid channel is dimensioned and configured so that fluid flowing through the fluid channel has a slower flow rate than fluid flowing through the fuel supply conduit.”

Examination and allowance of new claims 25-27 is requested.

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**Conclusion**

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant, therefore, respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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